

IMAGES IN MEDICINE TUMOUR LIKE LESION OF FINGER

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In an era of evidence based medicine, histopathology plays a major role in providing a conclusive tissue diagnosis. Surprises in the practice of diagnostic pathology is not uncommon. Quite often, a clinically neoplastic lesion may actually be non tumorous on histopathology. Such tumor like lesions of extremities include developmental anomalies, hamartomas, dermoid cysts and infections.

A 34 year old lady presented with complaints of swelling and mild pain in the left middle finger since two months. She also had a history of injury with a wooden splinter at the same site a few days before the onset of swelling. On examination, a tender nodular swelling over distal phalanx of the middle finger was noted. A clinical diagnosis of neurofibroma was considered and the lesion was completely excised for histopathological examination.

The biopsy showed skin with granulation tissue formation in the subcutis (Figure 1). Confluent histiocytic

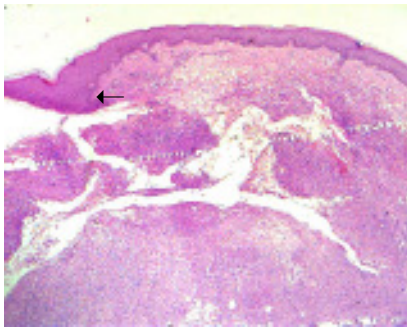


Figure 1 : Section showing inflammatory granulation tissue in the subcutis with focal acanthosis (arrow) of the overlying epidermis (Hematoxylin and eosin x 20).

granulomas were also seen along with inflammatory cells composed predominantly of eosinophils and lymphocytes (Figure 2, 3). The overlying skin was focally hyperplastic. Stain for acid fast bacilli (AFB) was negative. Fungal stains (Periodic acid Schiff and Gomori's Methamine silver) showed short closely septate forms of fungi (Figure 4, 5 and 6). Few of the fungal elements showed branching and constriction at the level of septation. A diagnosis of subcutaneous mycosis possibly phaeohyphomycosis was suggested based on clinical, histopathological and fungal stains findings.

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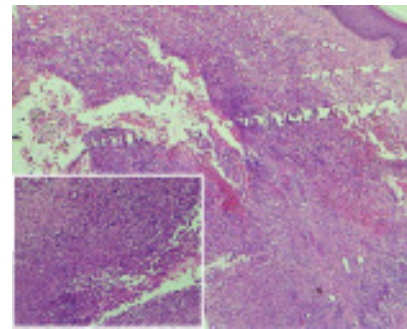


Figure 2 : Coalescing granulomas composed predominantly of histiocytes admixed with eosinophils, plasma cells and lymphocytes (Hematoxylin and eosin x 20). Inset demonstrates higher magnification of granulomas.

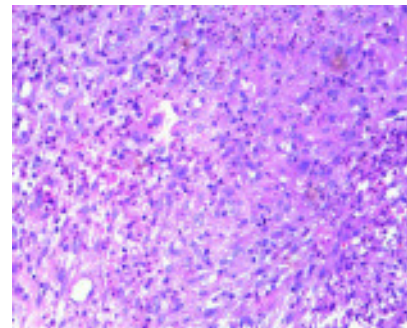


Figure 3 : Granulation tissue formation with mixed inflammatory cell response (Hematoxylin and eosin x 200).

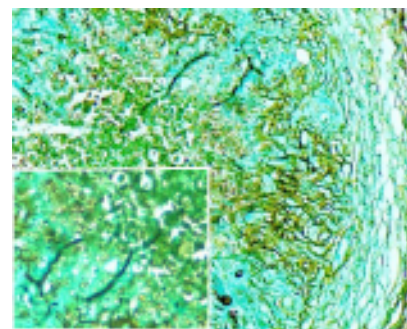


Figure 4 : Broad septate fungi highlighted by silver stain (Gomori's methanamine silver x 200). Inset shows higher magnification of the same.

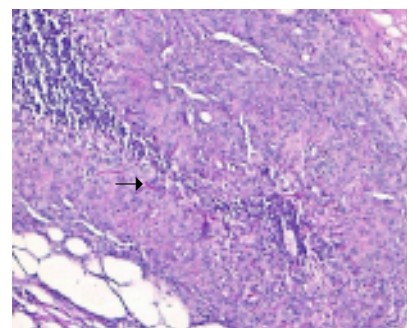


Figure 5 : Fungal elements (arrow) in granulomas staining magenta pink (Periodic acid Schiff x 100).

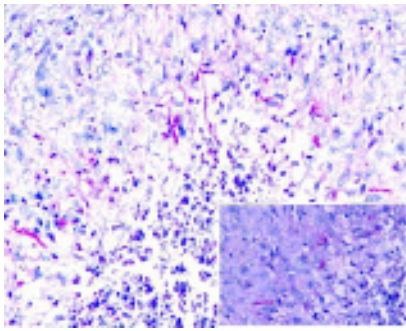


Figure 6: Short hyphae forms of fungi with branching and nodularity at the level of septations (Periodic acid Schiff x200). Inset show fungi on higher magnification.

Phaeohyphomycosis is a rare infection relatively common in the tropics caused by group of subcutaneous fungi with low virulence and pathogenicity^{1,2}. It presents as localized infection in exposed region of the body after penetrating injury by wood splinter or other foreign object, which acts as a portal of infection. Phaeohyphomycosis can be caused by variety of polymorphous fungi that are saprophytes of soil and wood, for example *Exophiala jeanselmei*, *Phialophora parasitica* and *Xylohypha bantiana*. Though this infection can occur in healthy individuals immunocompromised are at a greater risk.

Phaeohyphomycosis has two main clinical forms: subcutaneous and systemic. Unlike other subcutaneous mycosis these fungi are quite localized and results in an abscess / cyst formation². It does not produce a sinus tract typically seen in mycetoma. Phaeohyphomycotic organisms results in a chronic suppurative lesion with tissue response characterized by histiocytic granulomas and granulation tissue

formation³. It neither induces epidermal hyperplasia nor ulceration characteristic of other subcutaneous fungi like chromoblastomycosis and sporotrichosis. Our case, however, showed mild focal hyperplasia of the overlying skin. Phaeohyphomycotic organisms are occasionally visible on hematoxylin and eosin stained section as brown structures but can more easily be identified and differentiated from other subcutaneous fungi by special stains. Short closely septate hyphae 2-6µ in width and moniliform fungi are usually present in the wall of the abscess. They may be branched and often constricted at the level of septations. Microbiological culture is essential for specific identification of the species. Culture could not be done in our case as the lesion was totally excised and sent in formalin for histopathology.

Treatment of localized subcutaneous fungus is surgical excision. In the present case complete excision of the nodule was done, hence no further treatment was required.

In tropical countries, the possibility of a localized subcutaneous fungal infection should always be borne in mind especially in penetrating injuries of the extremities.

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